

IN THE SPECIFICATION

Please replace the paragraph at page 7, lines 20-30 with the following amended paragraph:

– More specifically, embodiments of the invention include systems, apparatus and methods for administering software modules that operate as part of a storage area network management software application. One such method embodiment comprises operating a module server to service a plurality of different storage area network management modules. Each storage area network management module provides a respective type of management functionality for elements such as hosts, switches and storage devices operating within a storage area network associated with the computerized device. According to embodiments of the invention, the management module server lacks general administration capability of the plurality of different storage area network management modules. In other words, the management module server configured according to embodiments of the invention does not include management or administration functionality such as the ability to install and deploy new software modules. –

Please replace the paragraph starting at page 14, line 21 and ending at page 15, line 13 with the following amended paragraph:

– In step 200, the storage area network management application 120 operates a module server 122 to service a plurality of different storage area network management modules 123 that each provide a respective type of management functionality for elements 150 operating within a storage area network 100 associated with the computerized device 110. According to embodiments of the invention, the management module server 122 either does not require or lacks administration capability of the different storage area network management modules 123. That is, the module server 122 according to this invention does not require the ability to install, deploy, deinstall or un-deploy and/or return information regarding the various modules 123 used for

management of elements 150 within the storage area network 100. In addition, the module server 122 does not include other administration functionality such as controlling general module operational functionality such as configuring how modules are to start and stop. The module server 122 is also not responsible for collecting data or module descriptor information (to be explained) associated with the modules 123 for return to the management console 142. It is noted that the module server 122 may include some or all of such management functionality, but embodiments of the invention do not rely on, require or use such module administration or management features of the module server 122. Rather, embodiments of the invention administer the modules 123 via management and administration functionality provided by the administration module 124 and its associated module administration functions 130 and module administration interfaces 125. Accordingly, the module server 122 used in embodiments of this invention can be devoid of module or component administration logic, thus making the module server 122 a more lightweight software process as opposed to conventional component servers that include tightly integrated or built-in component management functionality. –

Please replace the paragraph at page 15, lines 14-30 with the following amended paragraph:

– In step 201, the storage area network management application 120 operates the administration module 124 in conjunction with the module ~~server~~ server 122. The administration module 124 is a module itself like the other modules 123 and interacts with the module server 122, but instead of providing element management functionality like the module 123, the administration module 124 provides a plurality of module administration interfaces 125 that can be remotely invoked (e.g., via the console 142) to administer the different storage area network management modules 123. That is, the administration module 124 provides module management functionality for the modules 123, and since it is a module itself, the module server 122 views the administration module 124 in a manner similar to that of any other module 123 with respect to its

operation. One difference then between the software modules 123 that operate in conjunction with the module server 122 and the administration module 124 that also operates in conjunction with the module server 122 is that the modules 123 provide management functionality for storage area network elements 150 (e.g., devices in the storage area network environment 100) whereas the administration module 124 provides administration and management functionality for the other software modules 123, for the module server 122, and in some cases, for itself. –

Please replace the paragraph at page 28, lines 11-20 with the following amended paragraph:

– Alternatively, in step 256, in response to a describe module call 144 received in step 252, the management ~~server~~ process 120-2 transmits a module descriptor associated with the module identification received in the call 144. The module descriptor provides one or more portions of descriptor information, including for example a description of the module, a status of whether the module is enabled for activation upon startup of the module server, and a published name by which the module may be accessed for storage area network element management functionality by an application (e.g., console 142) providing the describe module call. The describe module call can accept the identity of specific modules 123, or if specific module identity is supplied, all module descriptor information for all modules 123 is returned 146. –

Please replace the paragraph starting at page 29, line 12 and ending at page 30, line 7 with the following amended paragraph:

– Specifically, in step 260 the management process 120-2 receives a “module container state” interface call 125 to an activation control interface 125. The module container state interface call 125 identifies a module container state that the administration module 124 uses to configure a container state associated with the module 123 identified in the call. The container state of a module 123 contains operational

information or data identifying how the particular module 123 should operate (or how the module server 122 should operate) upon receiving incoming storage area network element management requests from client applications that desire to use the functionality of the particular module 123. In particular, in one embodiment of the invention, the module container state interface call 125 can convey container state information that indicates that the administration module 124 is to set the container state of the identified module 123 to a "discarding" state in which the module 123 (or the module ~~server~~ server 122) is to discard incoming storage area network element management requests. This container state can be useful, for example, in situations in which a particular installed module 123 is installed with on-demand activation enabled such that any incoming requests for access to functionality of that module cause the module server 122 to immediately activate the module 123 in order to process the incoming client requests. If on-demand activation is active and an administrator 180 wants to manage a particular module 123, the administrator may need to be certain that the module 123 will remain un-activatable in the event that a client application (other than the application performing the administration task) requests the service provided by the module 123. Accordingly, since embodiments of the invention provide the module container state interface 125, the administration module 124 can turn off the ability of the module server 122 to automatically invoke the module 123 in the event the client application asks for its service (via service interface 135 to that module 123) during the same time that the administrator 180 desires to perform administration 131 (via calls 125) to the module 123. –

Please replace the paragraph at page 31, lines 5-7 with the following amended paragraph:

– In step 203 in Figure 9, the management ~~server~~ process applies module administration functionality 130 associated with the remotely invoked module administration interface, which in this example is the module container state interface 125. –

Please replace the paragraph at page 31, lines 8-10 with the following amended paragraph:

– Specifically, in step 261 the management ~~server~~ process 120-2 configures the container state associated with the module 123 based on module container state information identified in the module container state interface call 144 as explained above. –